

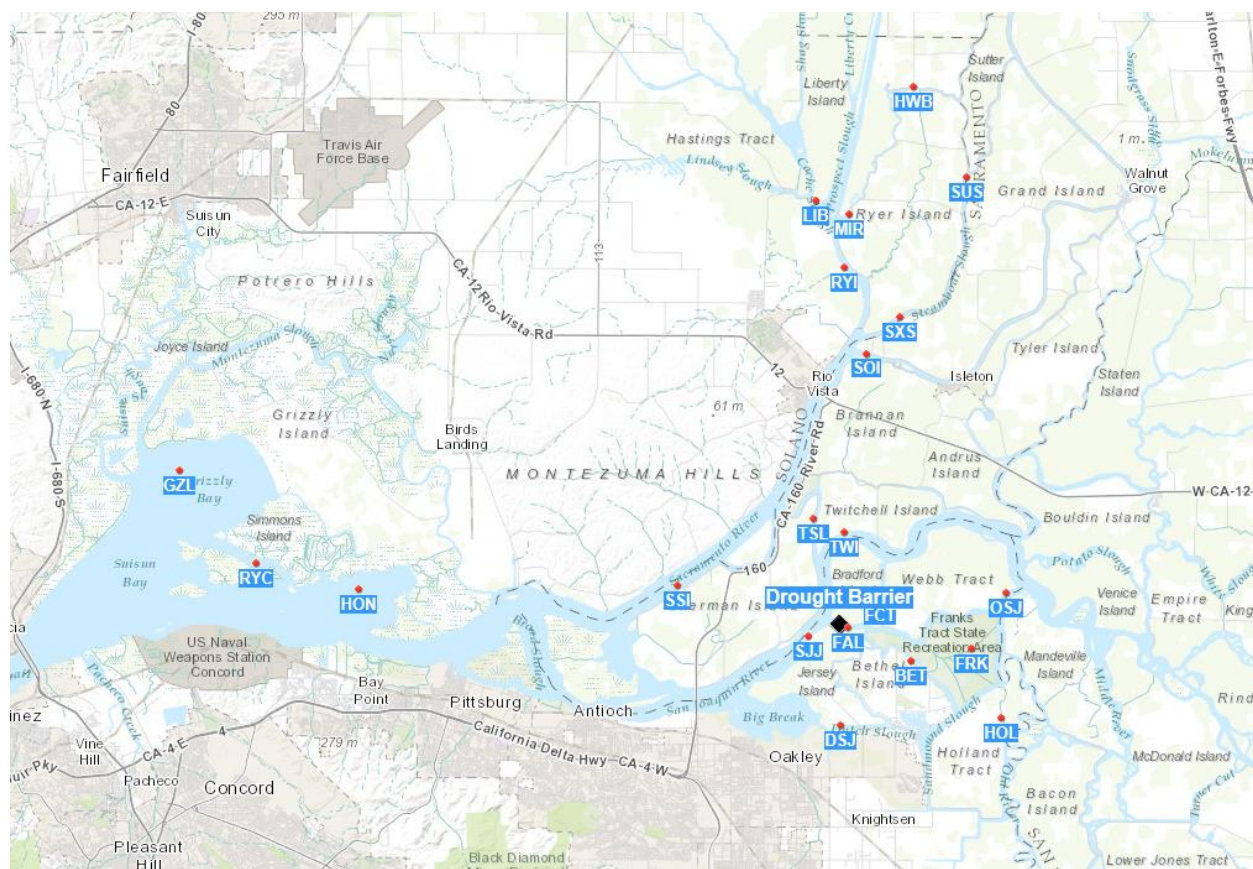
Emergency Drought Barrier Water Quality Monitoring Summary¹

Weekly Update for November 2 through November 8, 2015

Below is a summary of water quality, flow, and velocity data since the hydraulic closure of the Emergency Drought Barrier (EDB) at West False River on May 28, 2015, with emphasis on trends observed during the past week. The EDB rock placement was completed on June 12, 2015. On October 1, 2015, the contractor began breaching the EDB, allowing tidal flows to resume passing through the False River channel. As of November 6, 2015, 99% of the barrier has been removed. Work to remove the sheet pile abutments is continuing. Full removal will be completed by November 15, 2015.

For additional water quality monitoring data, access the network of CDEC stations at the following link:

<http://dwr.maps.arcgis.com/apps/Viewer/index.html?appid=3be5e0bbe0994b76883b0567f4f6b9e3>

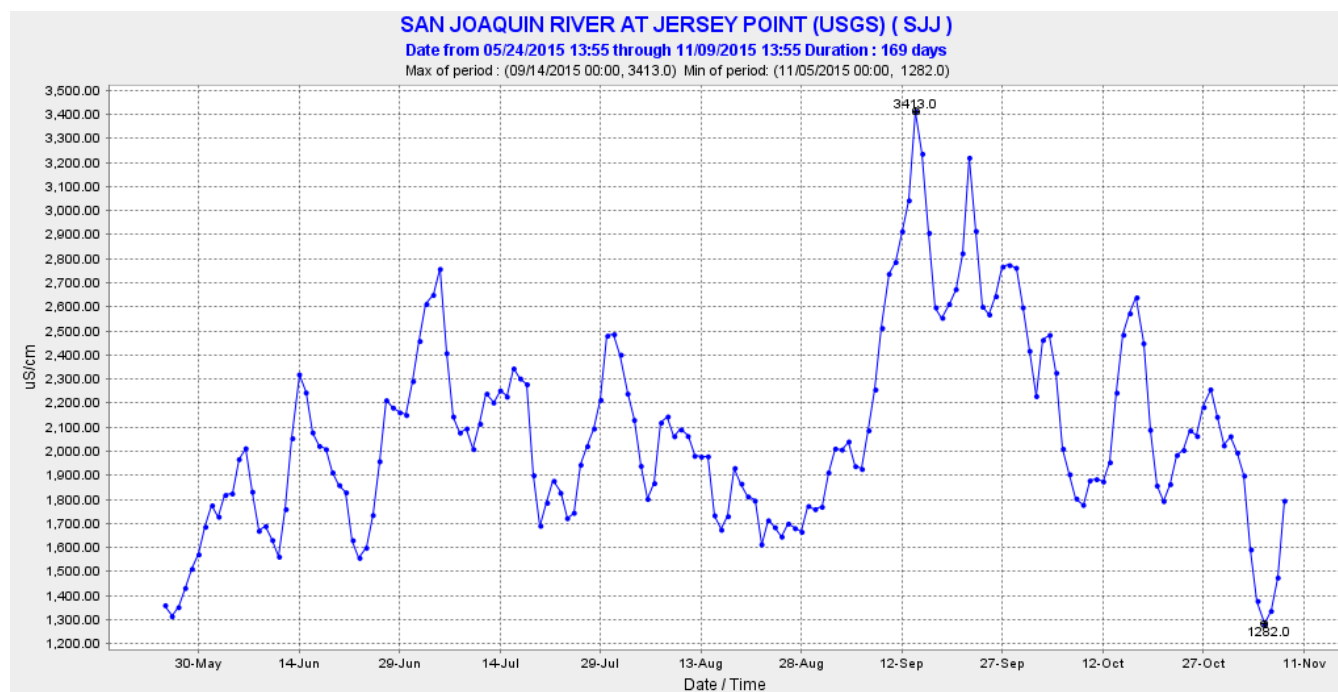
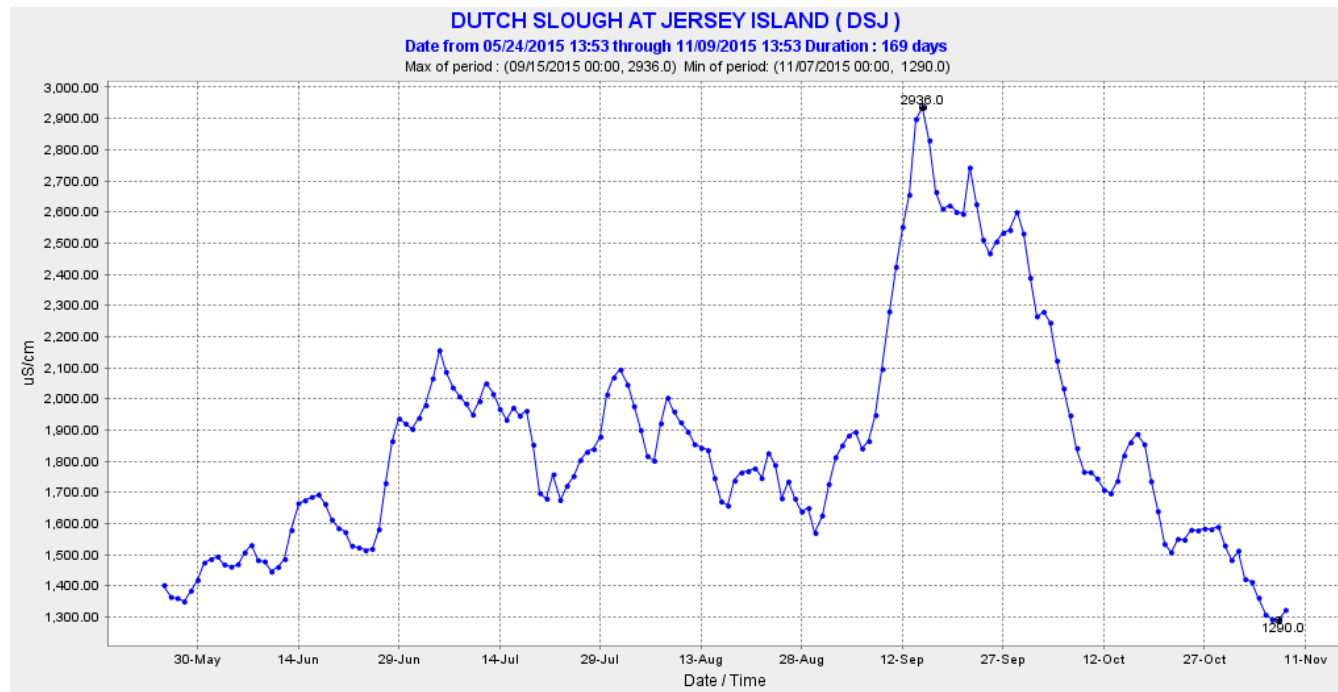


¹ All data in this report and subsequent weekly reports posted to California Data Exchange Network (CDEC) are preliminary and have not yet been validated.

Specific Conductivity

During the past week, average daily specific conductivity (EC) levels decreased further at Dutch Slough at Jersey Island (DSJ), but fluctuated sharply down and then back up again at San Joaquin River at Jersey Point (SJJ), False River (FAL), and at Fisherman's Cut (FCT). EC at Holland Cut continued to decline from the 5-month peak on October 25, 2015 and on November 8, 2015, average daily EC at HOL was $875\mu\text{S}/\text{cm}$, down from $920\mu\text{S}/\text{cm}$ on November 1, 2015.

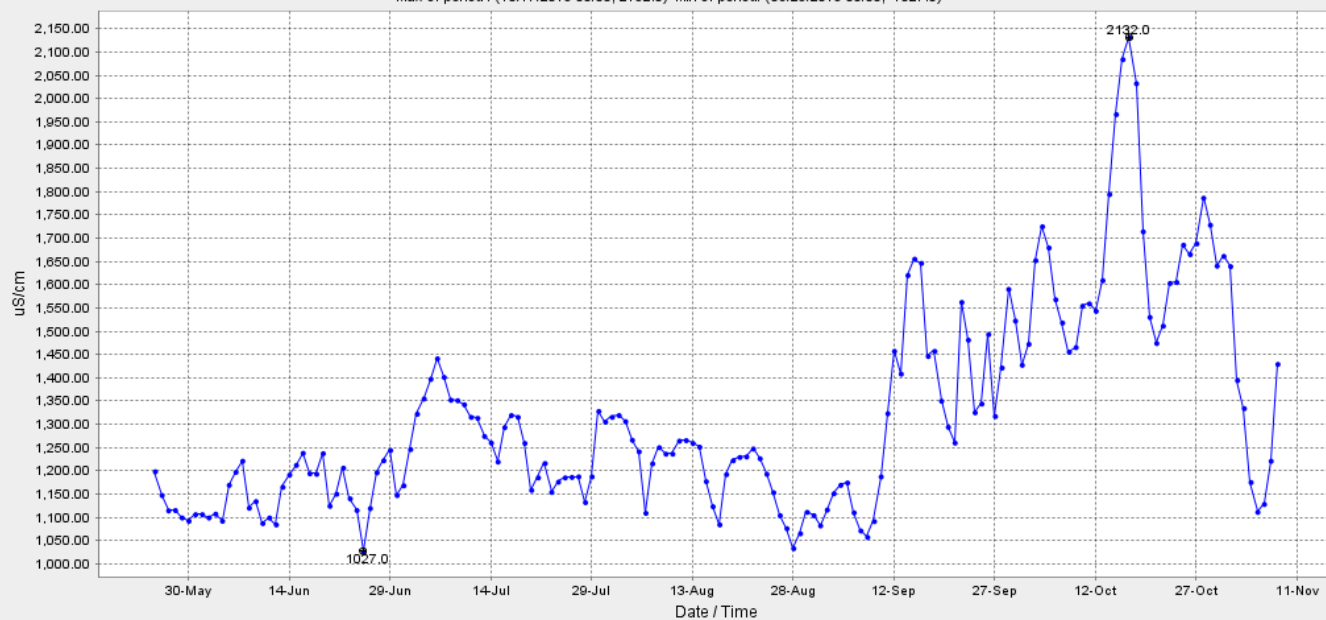
Daily average EC values for five stations in the vicinity of the EDB:



FALSE RIVER (FAL)

Date from 05/24/2015 14:03 through 11/09/2015 14:03 Duration : 169 days

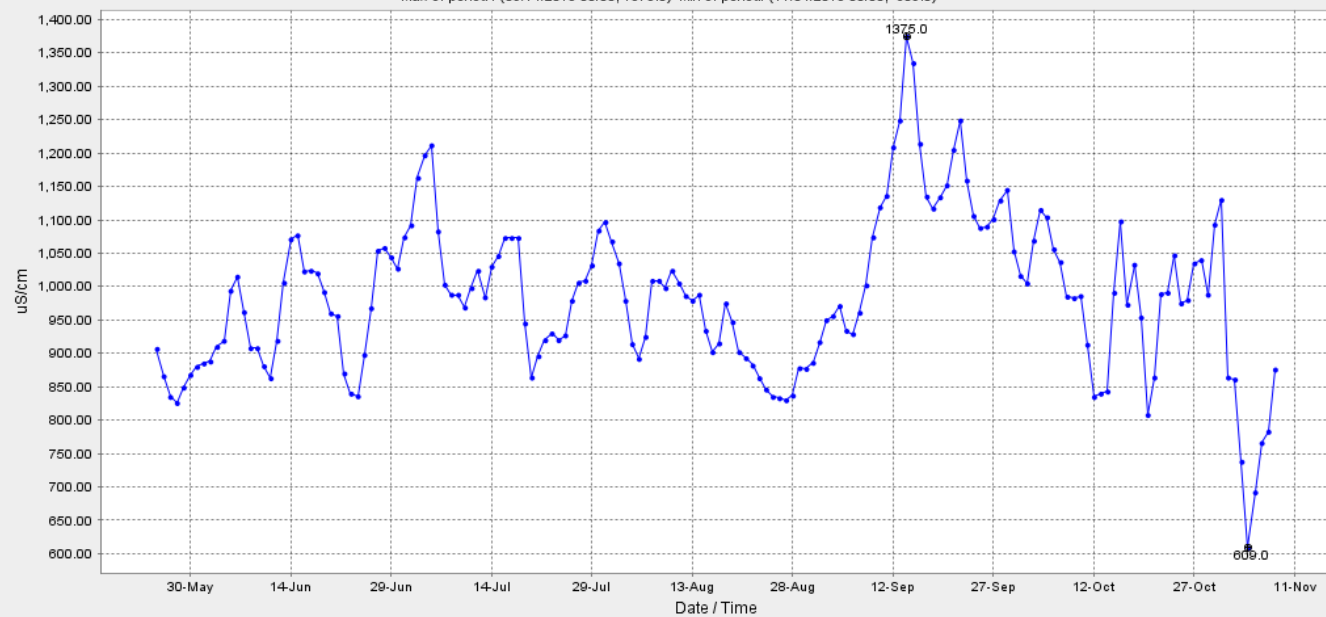
Max of period : (10/17/2015 00:00, 2132.0) Min of period : (06/25/2015 00:00, 1027.0)

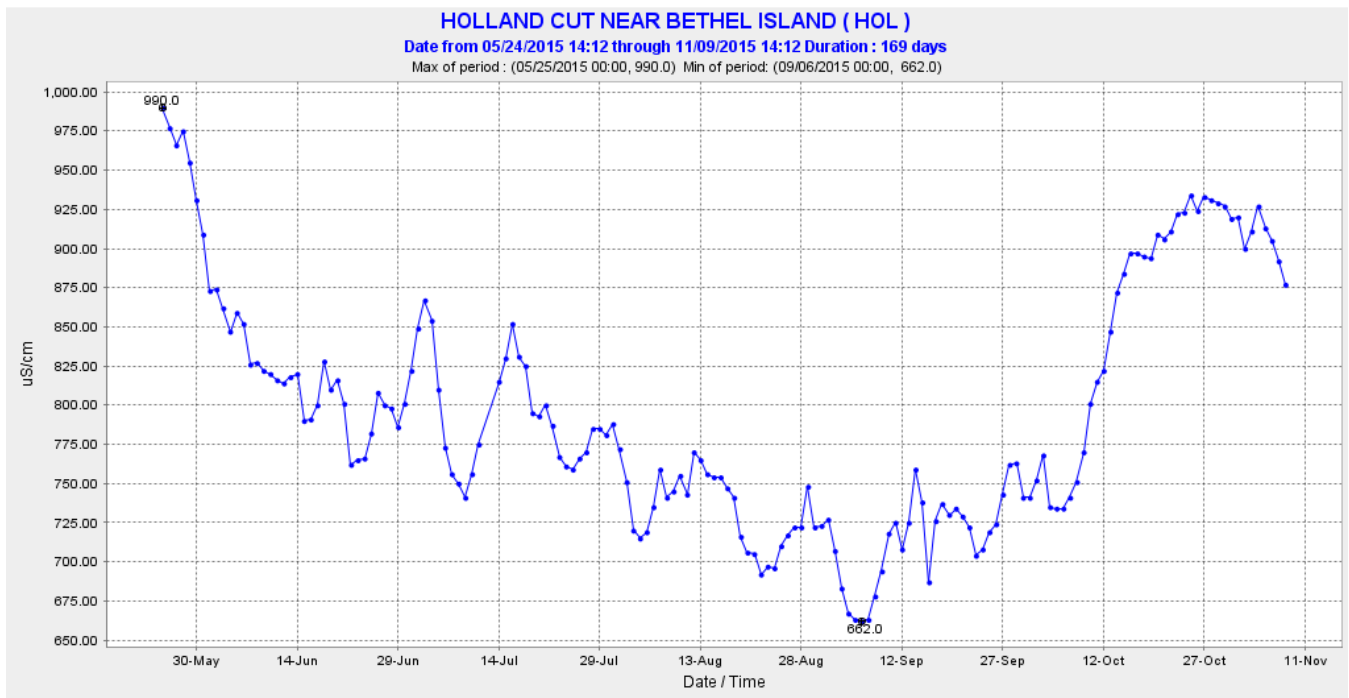


FISHERMANS CUT (FCT)

Date from 05/24/2015 14:10 through 11/09/2015 14:10 Duration : 169 days

Max of period : (09/14/2015 00:00, 1375.0) Min of period : (11/04/2015 00:00, 609.0)

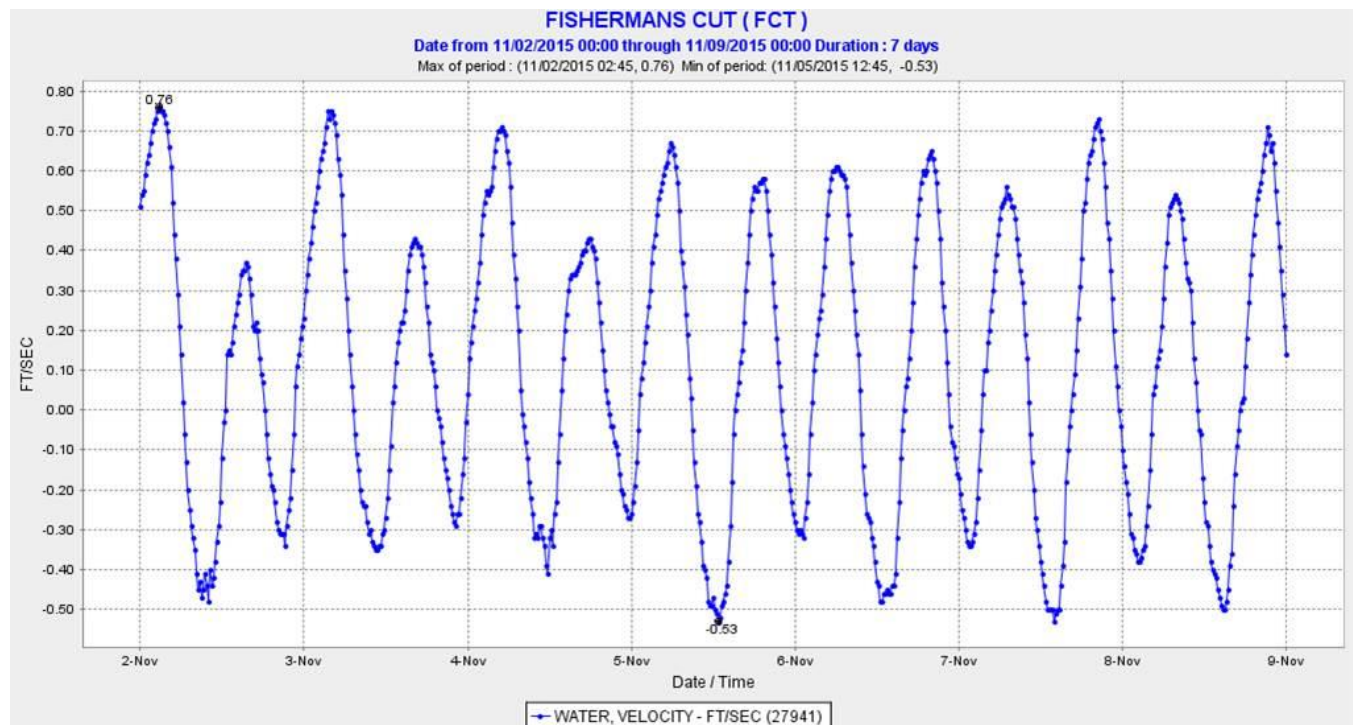




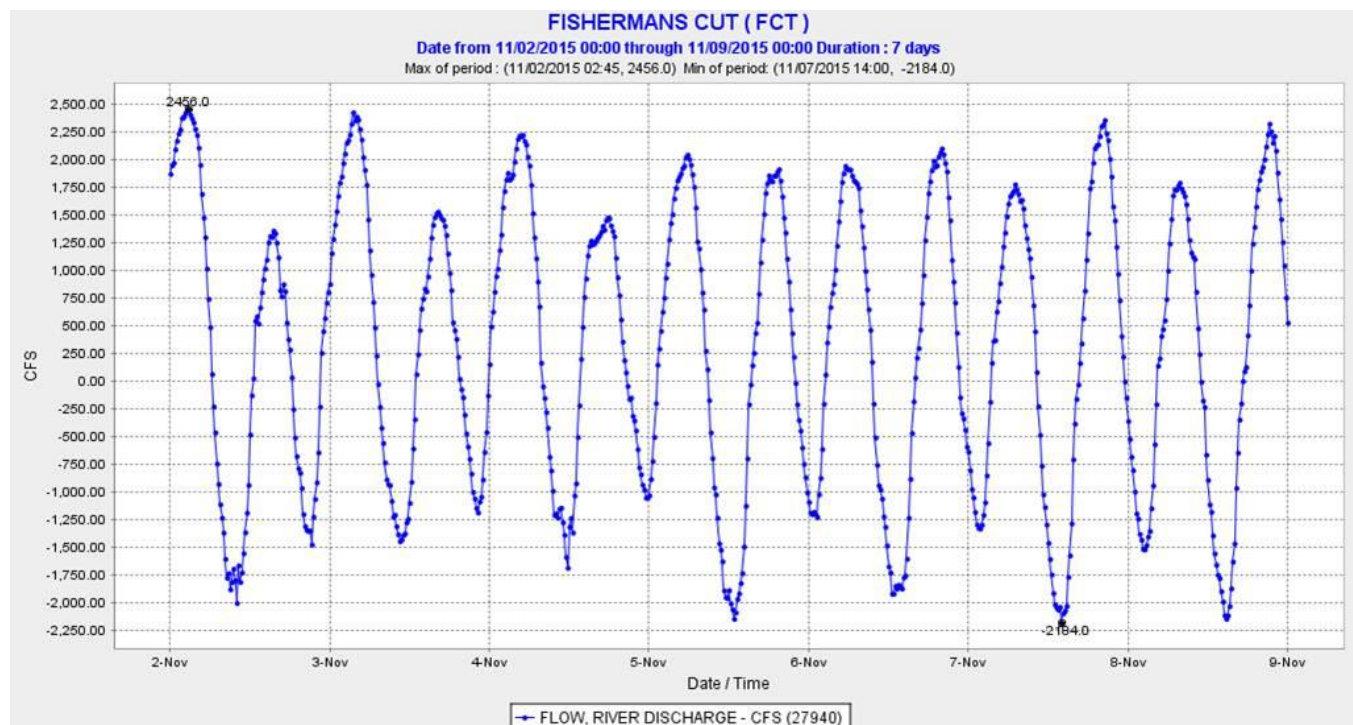
Flow and Velocity

Water velocities and flows were muted the week of 11/2 – 11/8 due to a neap tide as compared to the week of 10/26 – 11/1 (spring tide). Peak water velocities at the Fisherman’s Cut flow station varied between +0.76 ft/s (11/2/15 at 02:45) and – 0.53 ft/s (11/5/15 at 12:45). Positive water velocities measured at this station refer to water ebbing southward from Fisherman’s Cut into West False River and then flowing westward into the San Joaquin River. Now that the emergency drought barrier is 99% removed, flows are back to normal within Fisherman’s Cut. From November 2, 2015 through November 8, 2015, flows varied between +2,456 cfs (11/2/15 at 02:45) and –2,184 cfs (11/7/15 at 14:00). The peak flow occurred on an ebb tide. All FCT data will be validated and reported to the Water Data Library. Below are the velocity and flow plots for the last week of data.

15-Minute velocities for FCT in the vicinity of the emergency drought barrier:



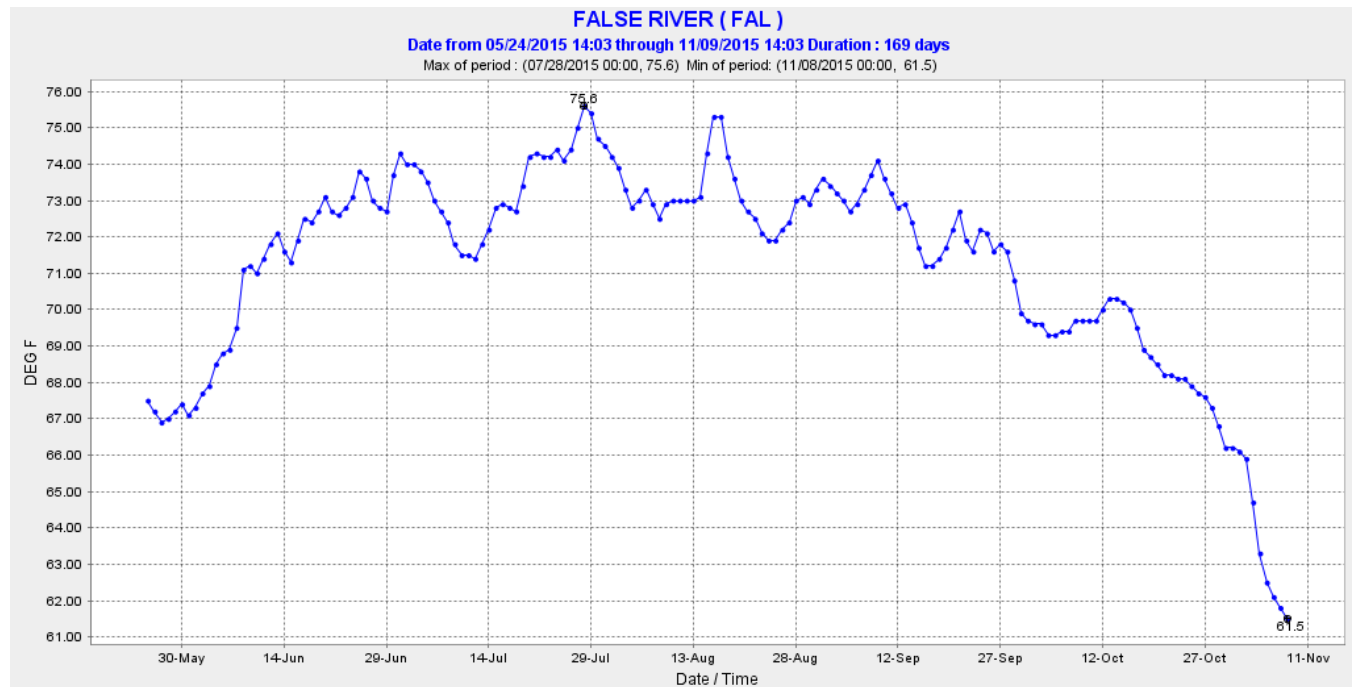
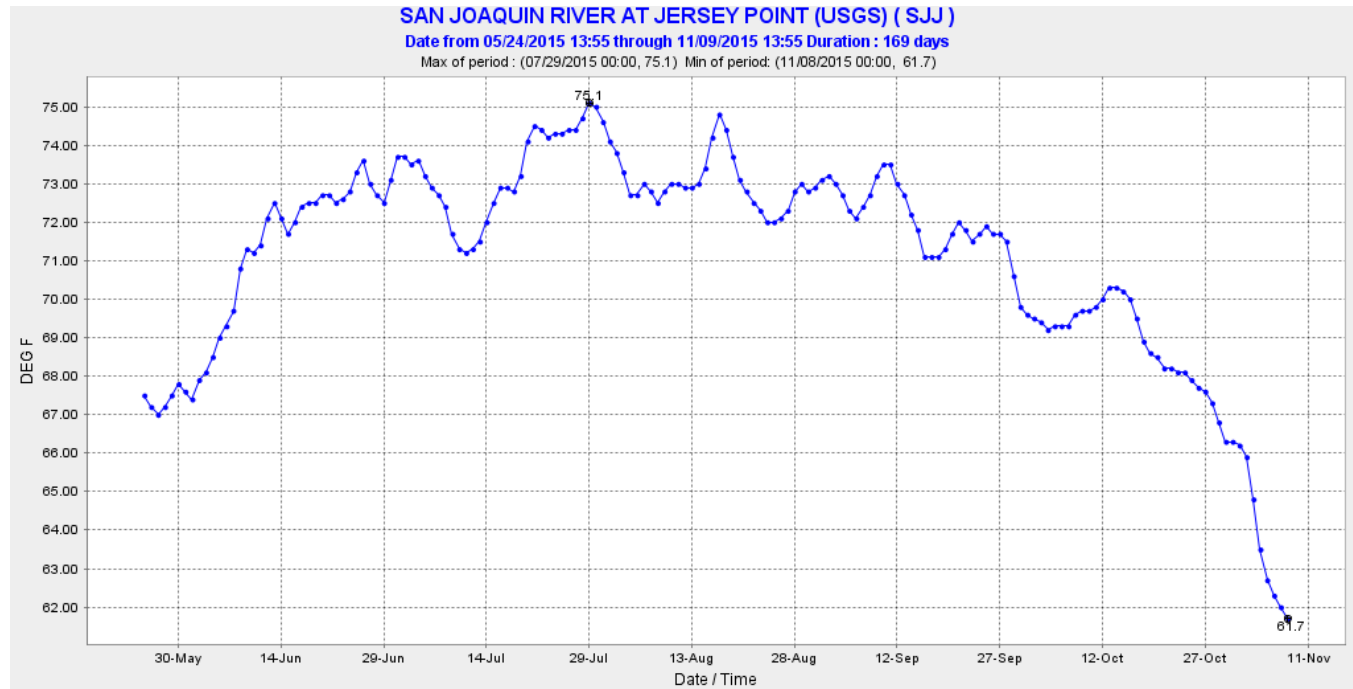
15-Minute flows for FCT in the vicinity of the emergency drought barrier:



Water Temperatures

Average daily water temperatures continue to decrease, dropping sharply by more than 4 °F at SJJ and FAL during the past week.

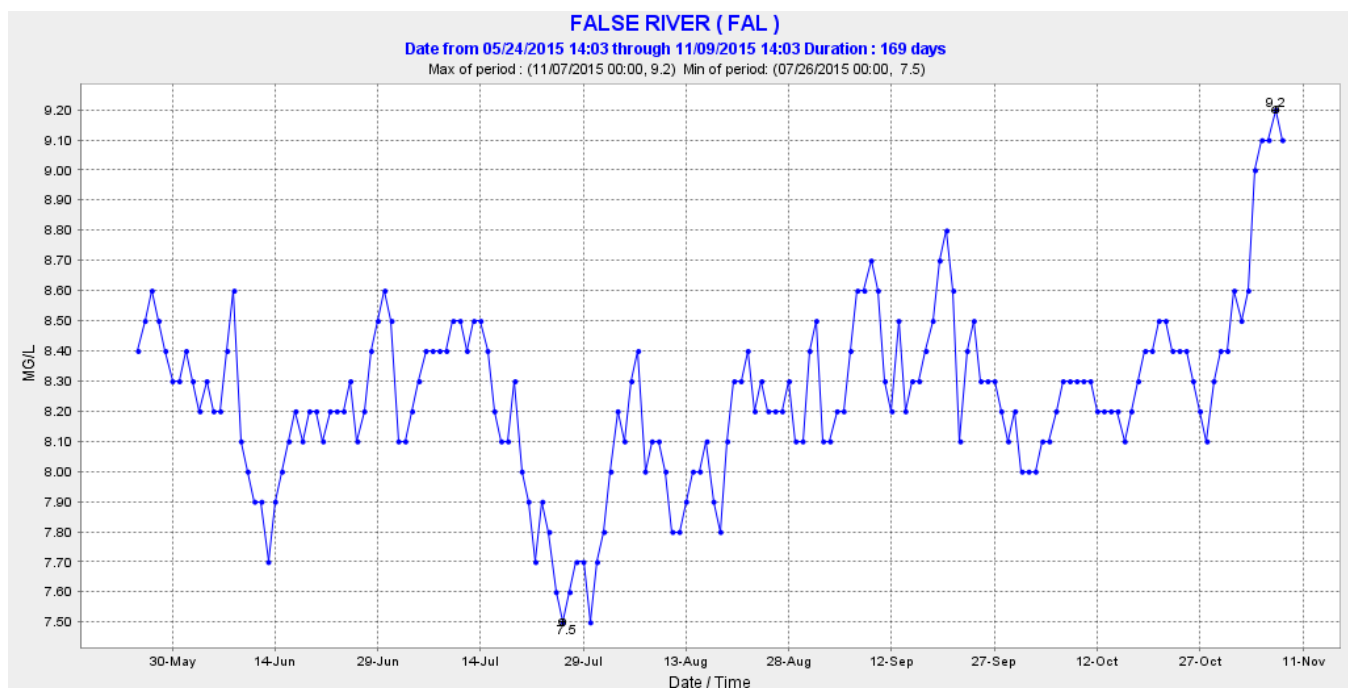
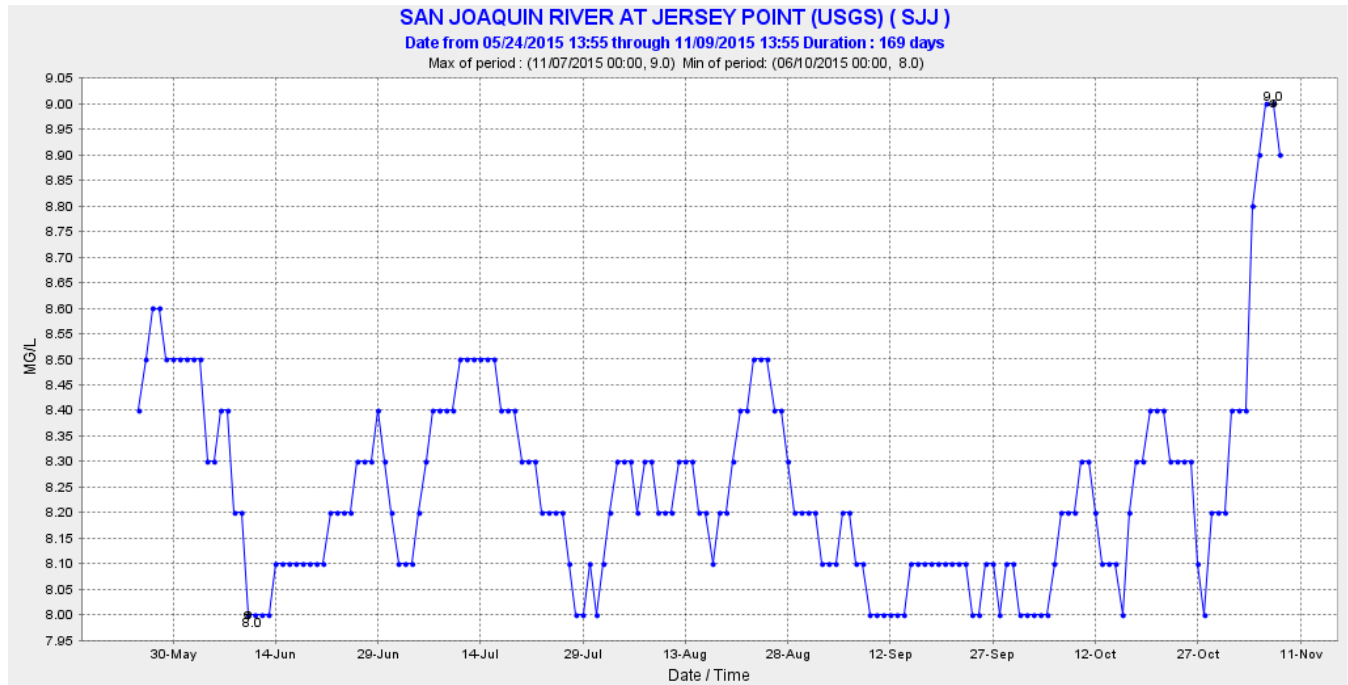
Daily average temperature for stations immediately upstream and downstream of the EDB:



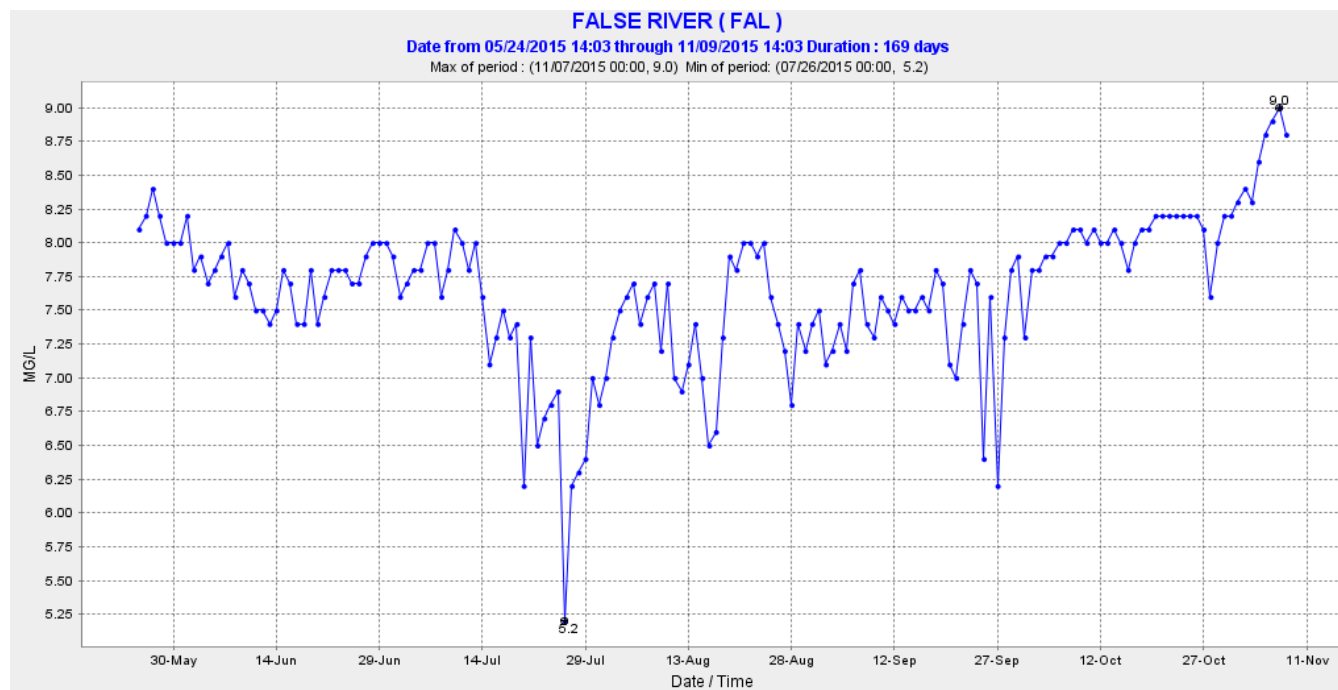
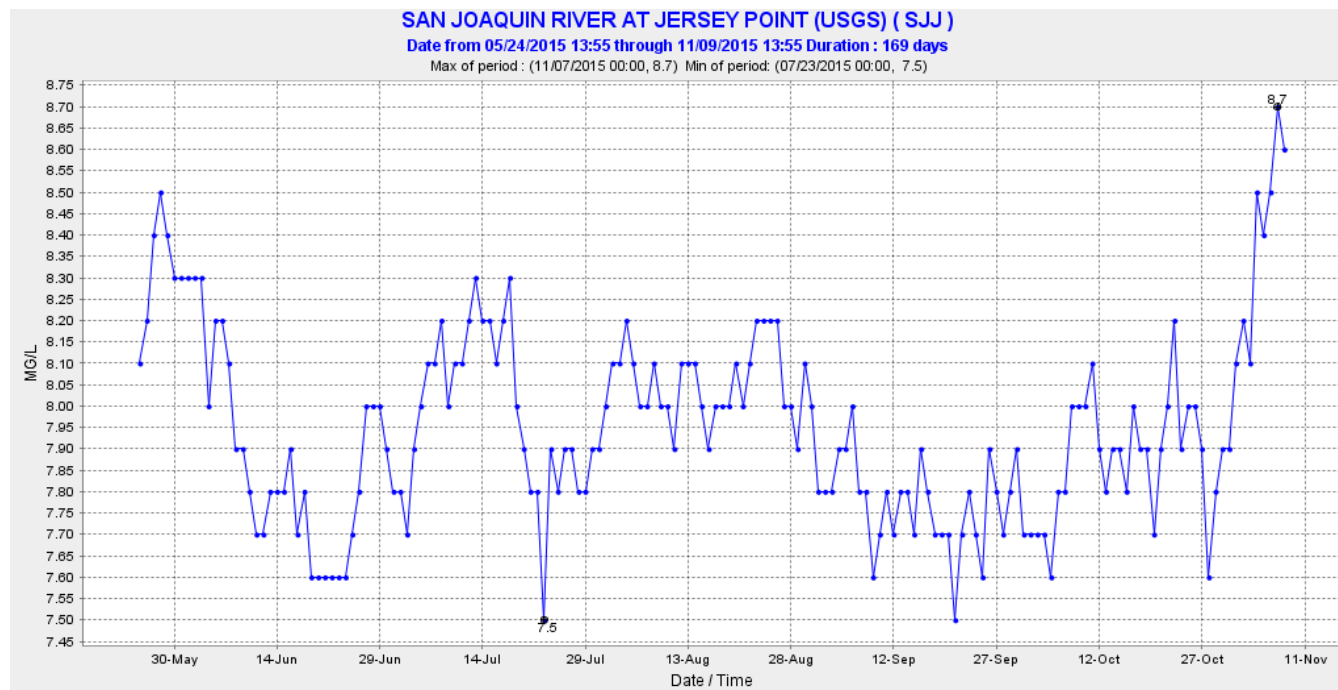
Dissolved Oxygen

Average daily dissolved oxygen (DO) increased sharply at SJJ and FAL during the past week, reaching the highest levels since EDB installation in late May. Minimum DO concentrations increased sharply over the week at both stations, especially at SJJ, reaching the highest concentrations since EDB installation. DO remains well above the 5.0 mg/l water quality criterion for aquatic life, as it has since the barrier was installed.

Daily average DO for stations immediately upstream and downstream of the EDB:



Daily minimum DO for stations immediately upstream and downstream of the EDB:



Below is a summary of EC data ($\mu\text{S}/\text{cm}$) by station for the period of November 2, 2015 through November 8, 2015. **Note: TSL data stopped transmitting through CDEC on Nov 6 so data are not displayed in the table.**

Station	Mean	Median	Minimum	Maximum	Area
Suisun Bay - Cutoff near Ryer (RYC)	18883	18951	14839	23443	Grizzly Bay to Lower Sac River
Grizzly Bay (GZL)	20232	20237.5	16399	22558	
Sacramento River near Sherman Island (SSI)	4718	4571	1403	9290	Dutch Slough
Dutch Slough @ Jersey Island (DSJ)	1351	1340	1160	1620	
San Joaquin River @ Jersey Point (SJJ)	1538	1340	647	3900	Vicinity of EDB
San Joaquin River @ Twitchell Island (TWI)	892	876	470	1854	
Fisherman's Cut (FCT)	763	727	498	1660	
False River (FAL)	1279	1180	649	2870	
Bethel Island near Piper Slough (BET)	985	995	853	1064	Frank's Tract
Franks Tract Mid (FRK)	913	889.5	755	1022	
Old River near Frank's Tract near Terminous (OSJ)	637	611	446	847	
Holland Cut near Bethel Island (HOL)	905	889	818	1020	
Sacramento River downstream of Isleton (SOI)	251	235.5	158	805	North Delta/Cache Slough
Steamboat Slough near Sacramento River (SXS)	188	176.5	159	296	
Cache Slough @ Ryer Island (RYI)	200	198	189	245	
Liberty Island @ Approx Cntr S End (LIB)	206	206	193	227	
Miner Slough (MIR)	177	173	157	213	
Steamboat Slough downstream of Sutter Slough (SUS)	165	164	156	175	
Miner Slough @ HWY 84 Bridge (HWB)	164	165	156	171	

Below is the mean specific conductance ($\mu\text{S}/\text{cm}$) for the period of November 2, 2015 through November 8, 2015. Means from RYC, GZL, and HON are much greater and thus are not shown due to scaling issues.

